(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 December 2001 (06.12.2001)

PCT

(10) International Publication Number
WO 01/93057 A1

(51) International Patent Classification[7]: G06F 15/00

(21) International Application Number: PCT/US01/17225

(22) International Filing Date: 25 May 2001 (25.05.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/579,610 26 May 2000 (26.05.2000) US

(71) Applicant: C2 MEDIA.COM, INC. [US/US]; 423 West 55th Street, New York, NY 10019 (US).

(72) Inventor: EMBRY, Jon; 444 Washington Blvd. #2531, Jersey City, NJ 07310 (US).

(74) Agents: FULGHUM, Roger; Registration No: 39,678, One Shell Plaza, 910 Louisiana, Houston, TX 77002-4995 et al. (US).

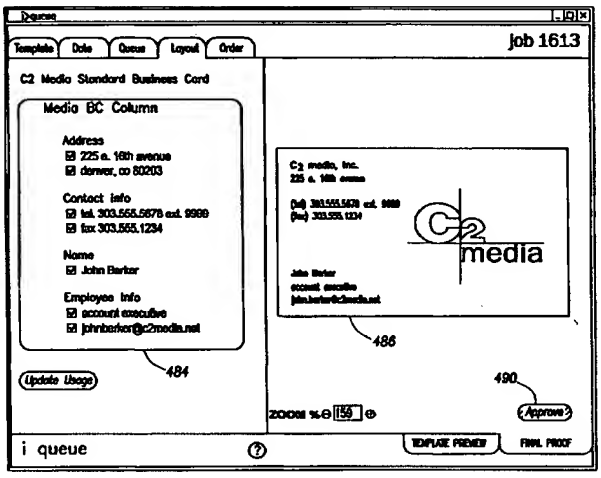
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD FOR THE ORDERING OF PRINT JOBS THROUGH AN ONLINR COMMUNICATIONS NETWORK



(57) Abstract: An online system (10) and method for ordering print jobs in which a customer can create and order print jobs on the basis of templates (220) and data records (484) associated with the customer. The templates (220) and data records (484) of the customers of the system are stored at a database. After selecting one of several templates (220) associated with the customer, the system can present for the customer the data records associated with the customer and the template selected by the customer. After the customer selects data records, successive proofs of the print jobs are displayed for a given template. The customer is provided with the options of editing and ordering one or more of the print jobs. The print jobs are then transferred to a commercial printer (14) for printing and later shipment to the customer.

WO 01/93057 A1

SYSTEM AND METHOD FOR THE ORDERING OF PRINT JOBS THROUGH AN ONLINE COMMUNICATIONS NETWORK

TECHNICAL FIELD OF THE INVENTION

The present invention relates in general to the field of printing, and, more particularly, to a method for ordering print jobs through an online ordering system.

BACKGROUND OF THE INVENTION

In the field of commercial printing, printing customers forward print jobs to commercial printers, who fill the customers' orders. Printing jobs from a printing customer will both identify the content of the print job and the number of copies to be printed. The printed material will vary according to the customer's needs, but may include such items as business cards, product cards, checks, invitations, brochures, posters, corporate stationery, and any other materials that can exist in printed form.

A single customer may order several printing jobs at once. In some cases, the content of each print job will include both standard information, which will not vary among the individual printing jobs, and personalized information, which is unique to each printing job. As an example, in the case of a business card, each business card will include text or graphics that are the same for each business card of an organization, including the name of the organization, the logo or slogan of the organization, and the office locations of the organization. In addition, each business card will include personalized information that is unique to each card, including the employee's name, title, telephone number, and address. As such each printing order will include both standard or static printed content and personalized or unique printed content. The same format of standard and personalized information may also apply to printing orders for checks, invitations, brochures, and other printed business materials.

The process of ordering a printing job often involves the print customer transmitting the content of the print job to a commercial printer or graphic artist for the production of a proof of the final printed content. In the case of a business card, for example, the customer will provide the unique content to the commercial printer. The commercial printer will then combine the unique content with the appropriate static content, if any, and

will produce a proof of the business card for the customer. The static content exists in the form of templates. In the case of a business card, for example, the commercial printer may have a template that is used to create business cards for the employees of a particular customer. The template will include static information that is to be printed on the business cards of each employee of the customer, such as the name, address, and logo of the customer. As a second example, there may be a template of static information for the product cards or brochures of a particular business. Like a template for a business card, a template for a brochure or some other item of corporate stationery will include both static information and personalized or unique content.

In many instances, the process of ordering a printing job necessarily involves the time-consuming involvement of both the commercial printer and the customer. In a typical transaction, the printer receives the order, produces a proof, and then communicates with the customer regarding the proof. The customer then approves the proof, in which the case the printing job is performed by the printer, or the customer suggests changes to the proof, thereby causing the commercial printer to create a second proof. This process is laborious and consumes the time of both the customer and the printer. As an alternative to reviewing a proof prepared by the commercial printer, the customer may choose to accelerate the printing process by not reviewing the proof prior to receiving the finished print job. By doing so, the customer avoids the time-consuming task of reviewing the proof and communicating approval or disapproval of the proof to the printer. The disadvantage of such an approach is that the final print product may contain errors that would have been identified by the customer had the customer set aside the time and effort to review the proof.

SUMMARY OF THE INVENTION

In accordance with the present invention, a method for ordering print jobs is provided that substantially eliminates or reduces the disadvantages and problems associated with prior methods for ordering print jobs.

The online ordering system of the present invention facilitates the ordering of print jobs through an online communications network, such as the Internet. A customer of the online ordering system can access the system through an online communications link and select among several print templates associated with the user. Following the selection of a

template, the customer can select among the data records stored by the online ordering system and associated with the user. Once selected, the data from the data records populates the dynamic data fields of the selected template. Upon review of a proof of a populated template, the user can edit the proof by editing either the data of the data record or the format of the proof layout.

An advantage of the present invention is an online ordering system for print jobs that renders unnecessary many of the laborious, mistake-inducing, and time-consuming tasks associated with known methods of ordering print jobs. The online print job ordering system permits templates and data records associated with the user to be accessed by the user as part of the print job order process. In this manner, the user can order jobs more quickly and with greater predictability compared with known methods of ordering print jobs. The process flow of the invention is advantageous in that it allows the efficient creation of a number of like jobs that are based on the same template but differ according to their inclusion of non-static or dynamic data. According to this advantage, the customer can quickly cycle through the ordering process, creating and ordering a number of print jobs based on the same template and the selected data records.

The online ordering system is also advantageous in that the order process is flexible enough to permit the editing of the proof during the ordering process. The editing of the proof may take the form of editing the data in the data record or altering the format of the data on the layout of a proof. The editing process does not disrupt the ordering process. Rather, the editing process is integrated into the ordering process so that the user's selection of a template and data records is not wasted or lost by the need to edit the data in the data record or format the layout of a proof.

Other technical advantages of the present invention will be readily apparent to one skilled in the art from the following figures, descriptions, and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete understanding of the present invention and advantages thereof may be acquired by referring to the following description taken in conjunction with the accompanying drawings, in which like reference numbers indicate like features, and wherein:

Figure 1 is a diagram of the online print order network of the present invention;

Figure 2 is a flow diagram of the template selection process of the present invention;

Figure 3 is a depiction of a web page for the selection of a template;

Figure 4a is a flow diagram of a data editing process of the present invention;

Figure 4b is a flow diagram of a data record selection and editing process of the present invention;

Figure 5 is a depiction of a web page for the selection of search categories for the selection of data records;

Figure 6 is a depiction of a web page depicting a drop down having search categories for the selection of data records;

Figure 7 is a depiction of a web page showing a list of data records returned following a search of data records;

Figure 8 is a depiction of a web page showing a queue of data records selected by the user from the list of data records returned following a search of data records;

Figure 9 is a flow diagram of the layout approval process of the present invention;

Figure 10 is a depiction of a web page for the editing of the format of a proof layout;

Figure 11 is a depiction of a web page in which one of several data entries has been de-selected as part of the editing of the format of a proof layout;

Figure 12 is a flow diagram of the entry of order information in the present invention;

Figure 13 is a depiction of a web page for the entry of order information for a print job; and

Figure 14 is a flow diagram for the print job ordering process of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The present invention provides a method and system for the online ordering of printing jobs. This method simplifies the existing print job ordering process and allows the customer to order print jobs more quickly and with fewer errors. The online print job ordering system involves the use of a communications network, including the use of a distributed computer network, such as the Internet. In the case of an Internet-enabled print job ordering system, print customers can access the web site of a central print order clearinghouse. The web site of the print order clearinghouse will include a set of web pages that permit the print customer to access templates of static or standard printed content. The print customer can then input or select content that is customized or unique to the print order. The unique or customized content is combined with content from templates that are maintained for each print customer by the print order clearinghouse. The print clearinghouse web site will present a proof to the customer, who can proof the print job and approve the print job for printing. The print job may be printed by the print job clearinghouse or the print job may be transmitted to a commercial printer for printing. The online ordering and printing system disclosed herein provides a secure extranet for print customers to order and process print jobs, serving as an online printing assistant for the creation and ordering of various types of print jobs.

Shown in Figure 1 is a representation of the online print order network 10 of the present invention. Print order network 10 includes a number of print customers associated with clients computers 12, a print order clearinghouse associated with a server computer system 14, and a number of printers 16. Server system 14 may include associated databases or mass storage 15. Print customers 12 may be any commercial, not-for-profit, or government organization that has printing needs. The printing needs of the organization may vary widely, but may include the customized printing of such items as business cards, brochures, sales sheets, corporate stationery, direct mail products, product cards, financial instruments, business forms, invitations, brochures, banners, signs, and advertisements. The print order clearinghouse 14 collects print orders from print customers. Print order clearinghouse 14 consolidates in one entity the design of the print orders, the collection of the print orders, and the transmission of the collected print orders to one or more commercial printers 16. The consolidation of these tasks in one entity is an aid to the printing customer in

that the printing customer need not do business directly with a number of commercial printers. Rather, the clearinghouse 14 reduces the cost to printing customers by collecting the print orders and transmitting the print orders to commercial printers 16 who are able to handle the order at the lowest cost, who have print equipment able to accommodate the print order, or who are located near the print customer 12. In some instances, the commercial printer will be associated with or at the same location as the print order clearinghouse 14.

In the embodiment of the invention of Figure 1, the print customers 12, print order clearinghouse 14, and printers 16 (whether or not associated with the clearinghouse 14) are coupled to one another through a communications network 18. Communications network 18 may include a private wide area network or a generally accessible, virtual network, such as the Internet. In the case of the Internet, the print customers can access the web site using any standard browser. Each customer of the print order clearinghouse 14 will include a login name and login password. In this manner, each customer is able to access only that portion of the online ordering system that is associated with its unique customer identification code or number. In the case of an Internet-based print order clearinghouse 14, after a customer reaches the web site of the print order clearinghouse, the customer is prompted at a login screen to enter the print customer's unique customer identifier and password. Requiring a unique customer identifier and password permits the print order clearinghouse to monitor each customer's access to the web site, readily identify the customer throughout the order process, and limit the access of each customer to sensitive information of other print customers of the print order clearinghouse.

The online print ordering process of the present invention uses a template-based system for the creation of print jobs. A template is any layout that may be repeatedly used by the customer to create a print job. A template may include both static information and dynamic locations for the entry of customized of customer-specific data. As an example, a template for a business card will include as static information the company logo and street address. The business card template will also indicate locations for the entry of customized information, such as the name of an employee and the employee's job title. The customizable information of each print jobs will vary with each use of the template.

Shown in Figure 2 is a flow diagram of the template selection process of the online print ordering system. In some cases, the user will proceed to the template selection

process following the user's entry into the system. At step 202 of Figure 2, the user initiates the template selection process by selecting the Template tab of the template selection web page of the online print job ordering system. A depiction of the template selection web page 217, including Template tab 218, is indicated in Figure 3. Following the selection of the Template tab on web page 217, the online print job ordering system displays at step 204 for the customer a list of template types. The list of template types or categories is itself customizable and is matched to the customer's prior indication of preferred or previously selected template types. In the case of a consulting firm, for example, the template types may include the following template types: business card, brochure, envelope, and letterhead. In the case of a product manufacturer, the selection of template types may include the following template types: business card, brochure, product cards, letterhead, envelope, and invoices. Thus, the list of templates types available to each customer is associated with the print customer's unique customer identifier. At step 206, the user selects the template type, and at step 208 the system displays for the user a list of templates for the selected template type.

With reference to Figure 3, example web page 217 depicts the left frame of the web page following the user's selection of "Business Card" as the preferred template type. Shown in box 220 is a listing 22 of the customer's available "Business Card" templates. A number of templates for each template type will be established for each use depending on the user's business needs. In the example of Figure 3, two templates are available under the Business Card template type. More or fewer template types may be available depending on the needs of the printing customer. As an example, a corporate customer may have a business card that varies slightly for the employees of each of its several operating divisions. A separate template could be established for the business card of each operating division. Each entry in the template listing 222 includes a short description of the template as well as PREVIEW, ORDER, and REVIEW JOBS buttons. Each template entry may describe the predefined dimension of the template, as well as the set of predefined colors or maximum number of colors of the template. Shown at 224 is a listing of the customer's template types. Should the customer wish to view the available templates for another template type, the customer selects or clicks on another of the available template types.

At step 210, the user selects one of the templates to be previewed. In the example web page 217 of Figure 3, the user has selected the template "C2 Media Standard

Business Card" to be previewed. Following the user's selection of a template, a preview of the template is generated at step 212. A preview 226 of the template "C2 Media Standard Business Card" is shown in the right frame of web page 217. Included in the template is static information in the form a logo 230 and dynamic or customizable data locations 228. In the example of Figure 3, the dynamic or customizable data fields or locations 228 include an address field 225, a contact information field 227, a name field 229, and an employee information field 231. At step 214, if the user determines that the previewed template is not correct or simply not wanted, it may select either another template at step 210 or another type of template at step 206. If the user approves of the template and wishes to create and order a print job based on the template, the user selects the order button to the right of the template listing in the left frame of web page 217.

The databases of the print order clearinghouse 14 store the data that is used to populate the template or templates that are selected during the template selection process. Data is stored in the database of the print order clearinghouse in the form of customer-specific records. This data can be entered manually by each customer or it may be entered in the database as part of a transfer from the customer's database to the database of the clearinghouse. As an example, each record of the database for a given print customer may identify the name, title, telephone number, facsimile number, mailing address, and email address of each employee of the customer. During the print ordering process, this data, which is maintained by the print order clearinghouse, can be accessed by the print customer to populate a template or templates selected by the customer.

When a customer has elected to order a print job based on a template that includes dynamic data locations 228, the user may select the Data tab 232 of web page 217. As an alternative, the system may direct the user to the functionality of the Data tab of the print ordering system. After this functionality has been selected, the user can populate the dynamic data locations of the web template with data from records that have been previously stored by the user in the database of the print order clearinghouse. Shown in Figure 4a is a flow diagram of the process of populating the dynamic or customizable portions of a selected template with data. At step 402, the user or the system selects the Data tab of web page 217. Although the system selects the Data tab whenever a template is ordered having dynamic data fields, the user can also initiate the data entry process by selecting the Data tab. After the

selection of the functionality of the Data tab, the system may load the data records for an uncompleted print job. If the user had previously used the online print ordering system and had selected a template and a data record, but had not completed the process of ordering the system may initially populate the template with data from the previously selected data record. If a record is pre-loaded by the system, the data entry processing moves from the decision block at step 404 to the decision block at step 406, where the user is given the option of changing the loaded record.

If the user wishes to change the loaded record, processing continues at step 408, where the user is given the option of editing the record that has been selected for loading into the template previously selected by the user. If the user edits and saves the record at step 410, processing continues at step 404, where the edited and saved record now resembles a pre-loaded record from the standpoint of the data entry process. If a pre-loaded record is not loaded by the system following the selection by the user or the system of the functionality of the Data tab, processing continues at step 412, where the user is given the option of proceeding with a blank record. If the user chooses to proceed with a blank record, a proof of the blank record is created at step 414. Similarly, if the user chooses at step 406 to proceed with the pre-loaded record, a proof is created at step 414 of the pre-loaded record. With reference to step 408, if the user wants to change the data record from the pre-loaded data record, but does not want to edit the data record, the user has the option at step 416 of proceeding with a blank data record. If the user chooses to proceed with a blank record, a proof of a blank record is created at step 418. If following the decision steps of step 412 or step 416, the user chooses not to proceed with a blank record, the processing proceeds to the data search stage, which is shown in more detail in Figure 4b. In sum, the search function at step 420 is reached if the user does not want to proceed with a pre-loaded record (including an edited version of a pre-loaded record) or a blank record, and the user wants to locate a record from the database of stored records maintained by the print order clearinghouse.

Shown in Figure 4b is a flow diagram of the search process for locating records from the database of the print order clearinghouse. The user or customer reaches this functionality of the online print ordering system if the user chooses to search the database for one or more records to populate the selected template. The records that may be searched and retrieved by the user are only those records that are associated with the customer, by an

association with the customer's unique identifier, and that are associated with the template selected by the user. As an example, because the customer's search is limited to those records associated with its unique customer identifier, the customer cannot populate a template with data from another customer of the online ordering system. Similarly, in the case of a template for a business card, the customer cannot retrieve records that are not associated with business cards, such as records for products, which could be used to populate templates for product cards or brochures.

Following the initiation of the search function by the system at step 420, the user selects the criteria for the search. Shown on example web page 217 of Figure 5, the two primary criteria for a search of records for business cards are shown in Employee box 440 and Location box 442. In the case of business cards in the example web page of Figure 5, the user can begin searching by selecting either the employee name or the business location as an identifier of the records to be searched. Assuming that the customer selects Employee box 440, the customer is directed to the web page of Figure 6. At step 422 of Figure 4b, the user is able to access a drop down menu 444 to search the database for specific employee records according to one of the listed data fields. The records that are searchable by the user are dependent on the type of template selected by the user. In the case of business cards, records are searchable on the basis of the name of certain employee identifiers or location identifiers. If, for example, a product card or brochure was selected as the template type, the searchable records would be product records that could be searched by their name or some suitable other identifier.

In the example of Figure 6, the customer can search the database by one of several variables, including the telephone number or the city of the employee as indicated by the employee data records stored in the clearinghouse database. Also included in the search box 448 is a dialog box 446. The customer may enter a value in dialog box 446 to narrow the search. In the example web page 217 of Figure 7, a search has been performed of all employee records in which the city of the employee is Denver. After the user has selected "Employee" for drop down menu 444 and "Denver" for dialog box 446, the customer selects the Find button 450, as referenced in step 424 of the flow diagram of Figure 4b. Following the search function, the search utility returns a list of records 452 meeting the search criteria.

At step 428 of Figure 4b, if the customer is not satisfied with the results of the search, the customer can return to step 422 to begin another search.

If the customer is pleased with the results of the search, the process of populating the selected template continues at step 430, where the user is given the option of editing any of the records returned by the search. If the user at step 432 chooses to edit any of the records returned by the search, the user selects the Edit button 454 (Figure 4b) next to the records to be edited. After the user edits the fields of the data record at step 434, processing continues at step 426 with the presentation to the user of the list of records returned as part of the previous records search. If the user chooses not to edit records at step 430, the user has the option at step 435 of creating a new record. The creation of a new record would be useful if, for example, a new employee has joined the user's organization and the clearinghouse database had not yet been updated to reflect the status of the new employee. If the customer chooses to enter a new record at step 435, processing continues at step 436, where the user selects the New Record button 456. Following the selection of the New Record button 456, processing continues at step 434, where the user enters the data of the new record. Processing then continues at step 426, where the system displays the list of records returned as part of the previous records search. If the user chooses not to create a new record, processing continues at step 437, where the user checks the records that will be used to populate the selected template by selecting the check buttons 458 next to the desired records. In the example of Figure 7, the check boxes next to the records for John Barker, Tom Calter, and Cathy Curry have been selected. At step 438, the system creates jobs for the selected records.

After the user has selected one or more of data records to populate the selected template, a job queue is displayed. In Figure 8, the job queue 460 is shown. Job queue 460 displays the list of jobs 462 that are currently in the customer's queue. The jobs in the job queue may fall into one of three categories: In Progress, Ready to Submit, or On Hold. In the example of Figure 8, the three jobs in the queue are all In Progress. A job falls in the In Progress category if the customer has not yet approved the proof layout for the job. A job falls in the Ready To Submit category if the customer has approved the proof layout for the job but has not yet provided the necessary ordering information for the job. A job is in the On Hold category if the job was initiated by a customer at an earlier time but not has not

progressed through the ordering process. The jobs in the queue in the example of Figure 3 are each in the In Progress category. If the user selects the Process Queue button, the system cycles through each job in the queue. For each job in the In Progress category, the system proceeds to the approval of the layout of the proof. For those jobs in the Ready to Submit category, processing continues with the entry of the order information and ordering steps. For those jobs in the On Hold category, processing proceeds to the approval of the layout of the proof.

After the user has chosen the data to be entered for a particular job on the selected template, processing of the print job continues with the approval of the layout of the selected data in the selected template. A flow diagram of the layout approval process is shown in Figure 9. After the Layout function is selected at step 466, a layout approval web page is displayed for the user. An example of such a page is shown in Figure 10. In the left frame 484 of the page is the data from the data record that matches the dynamic data fields of the selected template. In the right frame 486 is a proof of the template, which is now populated with the data from the selected data record. The address from the employee's data record is used to populate the address field. The telephone numbers from the employee's data record are used to populate the contact information field 227. The name of the employee is used to populate the name field 229, and the job title and email address of the employee is used to populate the employee information field 231 (as those dynamic fields are shown in Figure 3). In the example of Figure 10, a business card has now been populated with data from the data record of employee John Barker. As such, the name, telephone numbers, address, and job title of employee John Barker are placed in the dynamic data fields of the selected business card template. At step 468 of the flow diagram of Figure 9, the user is given the option of proceeding with the job order process. If the customer does not wish to proceed with the job order process, the job can be put on hold at step 478. If the customer wants to proceed with the job order process, the customer is given the option of changing the data in the data record at step 470. If the customer wishes to change the data in the data record, processing continues with the customer being given the option of changing the data in the data record.

If the data in the data record is correct and complete, the customer is given the option of modifying the layout at step 472. Modifying the layout of the proof may include

editing the data in the data record or modifying the format of the proof at step 474. The format of the proof may be modified by reformatting the wrapping of lines in the proof or deselecting data for inclusion in the proof. With respect to the deselection of data for inclusion in the proof, a second example of a proof layout web page is shown in Figure 11. In the example of Figure 11, check box 488 has been deselected, removing the email address of Cathy Curry from the proof. In this manner, even though the data of Ms. Curry's email address may be correct, the email address will not be included in the print job of Ms. Curry's business card. After modifying the format of the proof at step 474, the customer saves the changes to the format of the proof at step 476. Once the data and the format of the proof are correct, the customer can approve the proof at step 482 by selecting the Approve button 490 of Figure 11.

Once the job is approved by the customer, processing of the print job proceeds to the receipt of order information for the print job at step 479. The process of entering the order information for the job is described in more detail with respect to Figure 12. After the order information for the print job is provided at step 479, the system determines at step 481 whether additional print jobs for the selected template are in the job queue. If more print jobs are in the queue for the selected template, processing continues at step 483 with the selection of the next print job and the determination of the correctness of the data of the next print job at step 470. If no print jobs remain in the print queue for the selected template, the process is restarted at step 485, and the user may choose another template for creating and ordering other print jobs.

Shown in Figure 12 is a flow diagram of the order process following the approval by the customer of a job layout. The order completion process will involve the approval by the customer of quantity, turnaround time, and shipping information. The online ordering system will in the first instance attempt to populate the quantity and turnaround time fields with the quantity and turnaround values from the previously ordered job. The quantity value specifies the number of units of the job that are to be printed and the turnaround time value specifies the due date for receipt by the customer of the completed print job. At step 493, the system determines whether previous value exist for quantity and turnaround time. If previous values for quantity and turnaround time do exist from a previous job, those values are entered by the system. Shown in Figure 13 is an example of an order process web page

depicting a dialog box 510 for the entry of turnaround time information in field 514 and quantity information in field 516. If previous values do not exist, such as when the current job is the first job being processed by the customer as part of the customer's current session with the system, the system proceeds to step 497, at which point the system determines whether a shipment address is in the data record that is being used for the current job. If it is determined at step 497 that the data record includes an address, the system at step 499 populates the shipping fields of the Ship To dialog box 508 with the address. In the example of Figure 13, the address information for the data record for John Barker is entered in the address fields of dialog box 508. If the data record does not include an address, the processing of the order information continues with steps 494 and 496, where the customer is given the option of editing the quantity, turnaround time, and shipping fields. The user may correct any default information entered by the system at steps 495 or 499 or enter information in the space of blank fields if default values were not entered by the system.

Once the Ship To information and the Job Information have been entered, the user at step 498 submits the job by selecting a Submit button in the Order web page. The print job order system then checks the order information at step 500 to make certain that no items are missing. If it is determined at step 502 that items are missing, the user is prompted at step 506 to enter the missing information. If no items are missing, the job is submitted at step 504 for printing and shipment to the customer at the address specified by the customer. The print job may next be transmitted for printing to a commercial printer who can fulfill the customer's order according to the number of units requested and the time allotted by the customer. In some cases, preference will be given to commercial printers who are in the same geographic area as the customer or who have previously worked with the customer on a satisfactory basis.

A diagram of the entire print order process is shown in Figure 14. At step 520, the customer chooses a template. After the selection of a template, the customer chooses the records that are to be used to populate the dynamic data fields of the template. At step 524, a proof is generated, as shown by the bi-directional arrows connecting step 522 (choosing of records) and step 524 (proofing of jobs); the steps of choosing records and proof jobs can be repeated a number of times depending on the correctness of the proof and the number of records selected. After the review of the proof, the process continues with the entry of order

information at step 526. A user may loop back from the entry of order information to the approval of a proof according to the number of print jobs in the print queue.

After the order information is complete and all jobs for all records for the selected template have been ordered or placed on hold, processing continues with the selection of another template. The placement of the template selection step before the step of selecting records allows the user to more quickly order like items. The system is established to allow the user to select a template and then select a number of data records that can be used to repeatedly populate the template for a number of like, but unique print jobs. In this manner, the user need not repeatedly cycle through the ordering process to select or reselect a template for each print job. Rather, a template is selected, and a number of unique but similar jobs can be created on the basis of a single template and a number of unique data records.

The present invention automates for print customers the process of ordering print jobs. The automation is accomplished by providing to print customers a system for creating and proofing print jobs through an online network, such as the Internet. By accessing the online ordering system, customers of the system can populate templates of print jobs with data from records stored by the administrator of the online print job ordering system. The present invention provides the print customer with greater control over the content of its print jobs and the entire print job ordering process. The present invention reduces the time typically spent by a customer in submitting a request for printed subject matter, reviewing a proof, and submitting order information. Because the system is automated and takes advantage of previously established templates and previously stored data records, the print job ordering process provides the customer with a process for ordering print jobs that is both fast and predictable. The online ordering process described herein permits the streamlined ordering of print jobs, while maintaining the flexibility of editing the content or format of the print according to the needs of the user.

Although the present invention has been described in detail, it should be understood that various changes, substitutions, and alterations can be made thereto without departing from the spirit and scope of the invention as defined by the appended claims.

WHAT IS CLAIMED IS:

1. A method for the ordering of printing jobs through an online communications link, comprising the steps of:

presenting to a print customer a set of print templates associated with the customer;

receiving from the print customer a selection of a template;

presenting to the print customer a list of data records associated with the print customer;

receiving from the customer a selection of a data record;

populating the selected template with the data from the data record selected by the print customer;

displaying the populated template, the populated template comprising a proof of the printing job;

receiving from the user a set of order criteria; and

transmitting the printing job to a printer for printing according to the printing criteria.

2. The method for the ordering of print jobs of claim 1, wherein the online communications link is the Internet.

3. The method for the ordering of print jobs of claim 1, further comprising the step of authorizing the customer's access to the web site.

4. The method for the ordering of print jobs of claim 3, wherein the step of presenting a set of print templates available to the user comprises the step of presenting a set of print templates associated with an identifier supplied by the print customer.

5. The method for the ordering of print jobs of claim 1, wherein the step of presenting a list of data records comprises presenting a list of data records associated with the print customer and the template selected by the print customer.

6. The method for the ordering of print jobs of claim 1, further comprising the step of authorizing the customer's access to the web site;

wherein the step of presenting a set of print templates available to the user comprises the step of presenting a set of print templates associated with an identifier supplied by the print customer; and

wherein the step of presenting a list of data records comprises presenting a list of data records associated with the print customer and the template selected by the print customer.

7. The method for the ordering of print jobs of claim 1, further comprising the step of editing the data record selected by the customer before the step of displaying the proof of the populated template.

8. The method for the ordering of print jobs of claim 1, wherein the order criteria comprises the turnaround time of the print job and the number of copies of the print job to be printed.

9. The method for the ordering of print jobs of claim 1, further comprising the step of altering the format or content of the proof following the display of the proof of the populated template.

10. A system for processing print jobs, comprising:

a communications network providing data communication between a number of print customers and a central location for processing print orders from the print customers; and

a server system located at the central location, the server system able to display a selection of templates, receive a print customer's choice of template, display set of data records associated with the print customer and the template chosen by the print customer, receive the print customer's choice of data record, display a proof, and submit the print job according to instructions from the customer.

11. The system for processing print jobs of claim 10, wherein the communications network is a client-server network.

12. The system for processing print jobs of claim 11, wherein the communications network is the Internet.

13. A method for ordering a print job via an online communications link, comprising the steps of:

establishing a communications link between a first computer system and a remote computer system;

selecting a template;

selecting a data record;

reviewing a proof of the template populated by the data from the data record; and

approving the proof for submission to a printer.

14. The method for ordering a print job of claim 13, wherein the online communications link is the Internet.

15. The method for ordering a print job of claim 13, wherein the step of establishing a communications link includes the step of accessing the web site of the remote computer system by supplying a data identifier to the web site.

16. The method for ordering a print job of claim 13, further comprising the step of editing the proof.

17. A method for the ordering of printing jobs via an online communications link, comprising the steps of:

presenting to a print customer a set of print templates available to the user;

receiving from the print customer a selection of a template;

displaying the template selected by the user;

presenting to the print customer a list of data records;

receiving from the customer a selection of data records;

populating the selected template with the data from a first data record selected by the print customer;

displaying the populated template, the populated template comprising a proof

of the printing job;

receiving from the user a set of order criteria;

transmitting the printing job to a printer for printing according to the printing criteria; and

populating the selected template with the data from the next data record selected by the print customer and thereafter repeating the steps of displaying the populated template, receiving a set of order criteria, and transmitting the printing job to a printer until each data record selected by the customer has been processed.

18. The method for the ordering of print jobs of claim 17, wherein the online communications link is the Internet.

19. The method for the ordering of print jobs of claim 18, further comprising the step of authorizing the customer's access to the web site.

20. The method for the ordering of print jobs of claim 19, wherein the step of presenting a set of print templates available to the user comprises the step of presenting a set of print templates associated with an identifier supplied by the print customer.

21. The method for the ordering of print jobs of claim 17, wherein the step of presenting a list of data records comprises presenting a list of data records associated with the print customer and the template selected by the print customer.

22. The method for the ordering of print jobs of claim 17, further comprising the step of authorizing the customer's access to the web site;

wherein the step of presenting a set of print templates available to the user comprises the step of presenting a set of print templates associated with an identifier supplied by the print customer; and

wherein the step of presenting a list of data records comprises presenting a list of data records associated with the print customer and the template selected by the print customer.

23. The method for the ordering of print jobs of claim 17, further comprising the step of editing the proof of the printing job.

24. The method for the ordering of print jobs of claim 17, wherein the order criteria comprises the turnaround time for the print job and the number of copies of the print job to be printed.

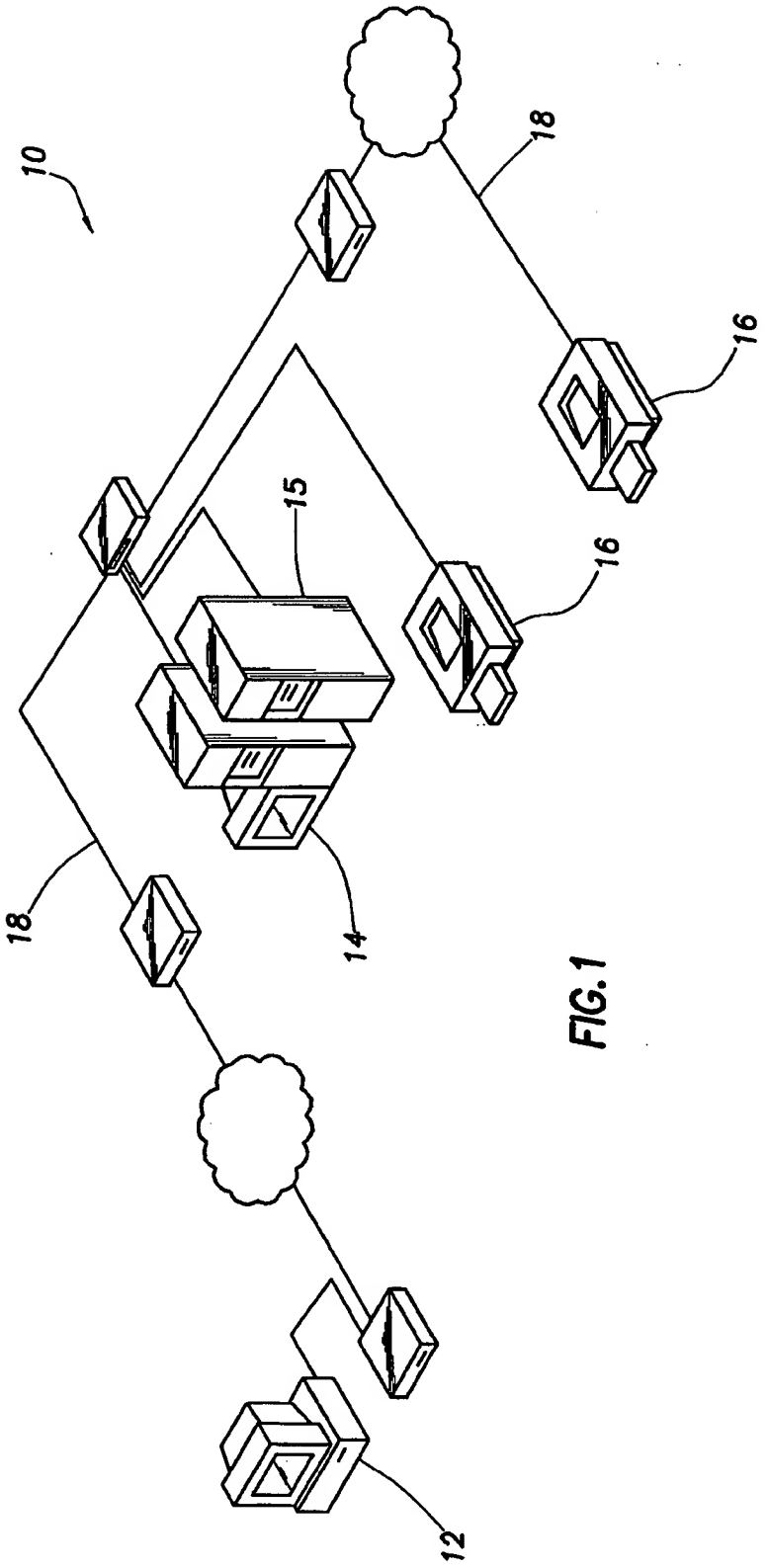


FIG. 1

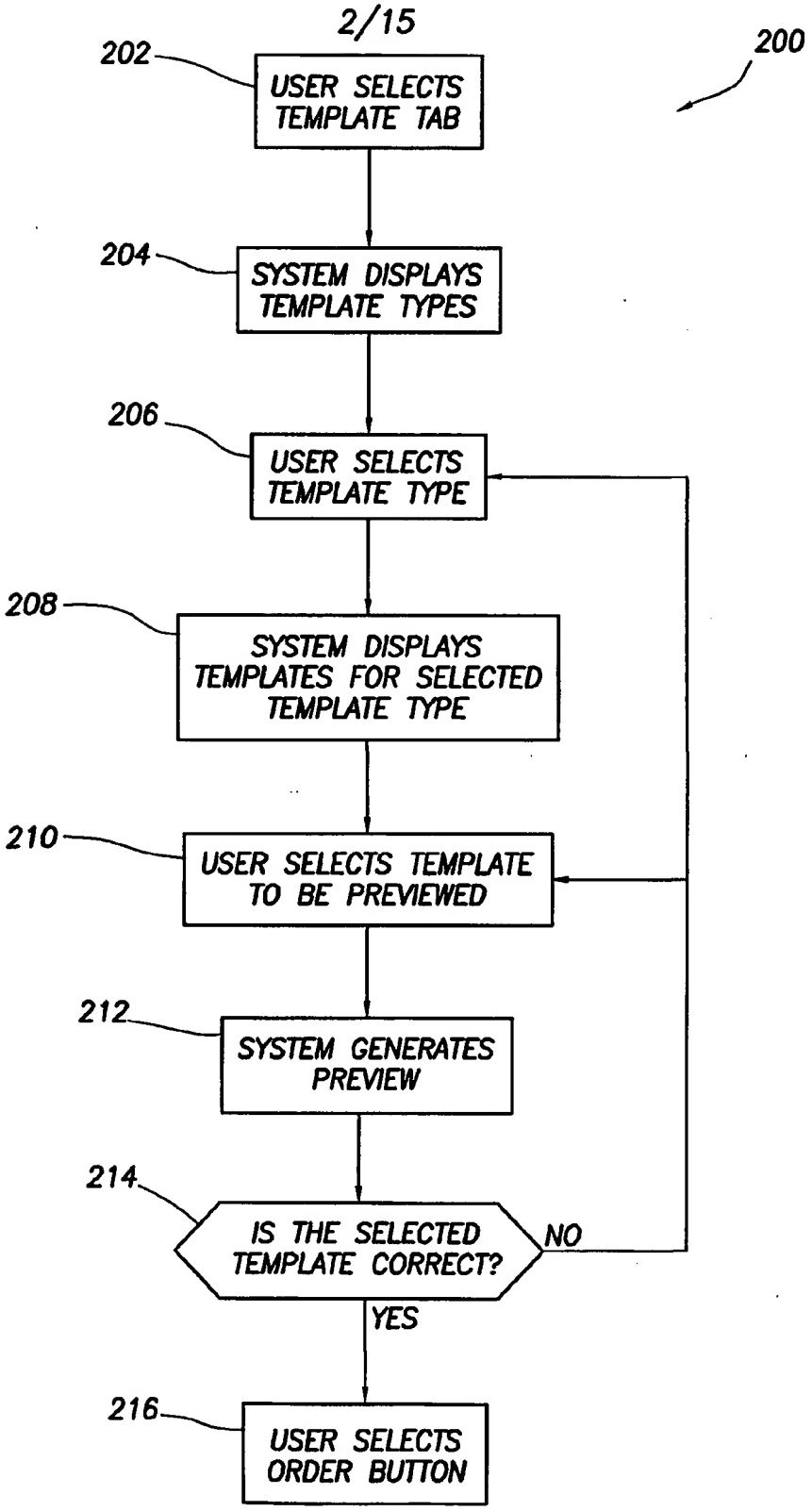

200
202
USER SELECTS TEMPLATE TAB
204
SYSTEM DISPLAYS TEMPLATE TYPES
206
USER SELECTS TEMPLATE TYPE
208
SYSTEM DISPLAYS TEMPLATES FOR SELECTED TEMPLATE TYPE
210
USER SELECTS TEMPLATE TO BE PREVIEWED
212
SYSTEM GENERATES PREVIEW
214
IS THE SELECTED TEMPLATE CORRECT?
NO
YES
216
USER SELECTS ORDER BUTTON

FIG.2

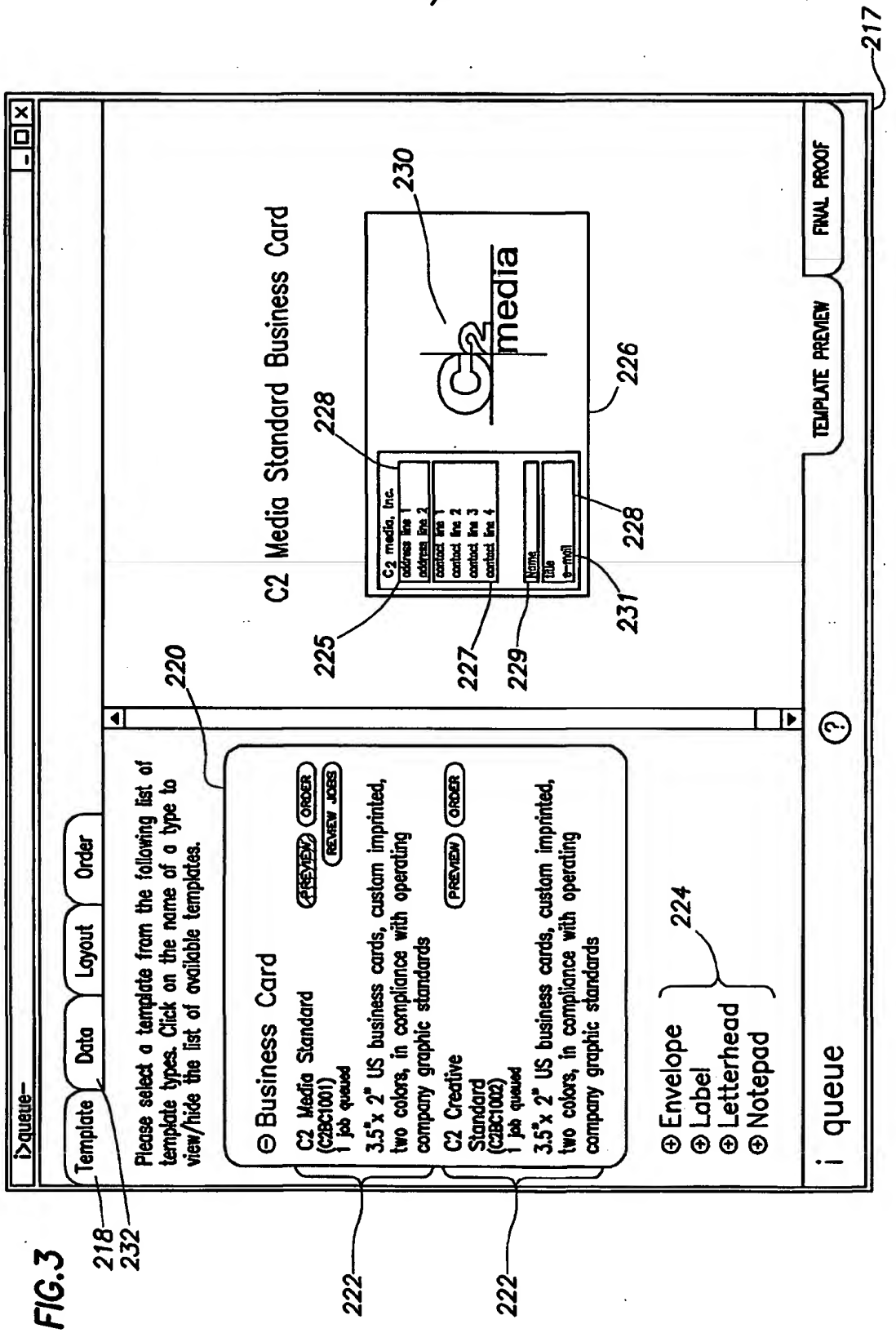

i>queue
Template
Data
Layout
Order
Please select a template from the following list of template types. Click on the name of a type to view/hide the list of available templates.
Business Card
C2 Media Standard (C2BC1001)
1 job queued
PREVIEW
ORDER
REVIEW JOBS
3.5"x 2" US business cards, custom imprinted, two colors, in compliance with operating company graphic standards
C2 Creative Standard (C2BC1002)
1 job queued
PREVIEW
ORDER
3.5"x 2" US business cards, custom imprinted, two colors, in compliance with operating company graphic standards
Envelope
Label
Letterhead
Notepad
i queue
C2 Media Standard Business Card
C2 media, Inc.
address line 1
address line 2
contact line 1
contact line 2
contact line 3
contact line 4
Name
title
e-mail
media
TEMPLATE PREVIEW
FINAL PROOF
218
232
222
222
220
224
225
227
229
231
228
228
226
230
217

FIG.3

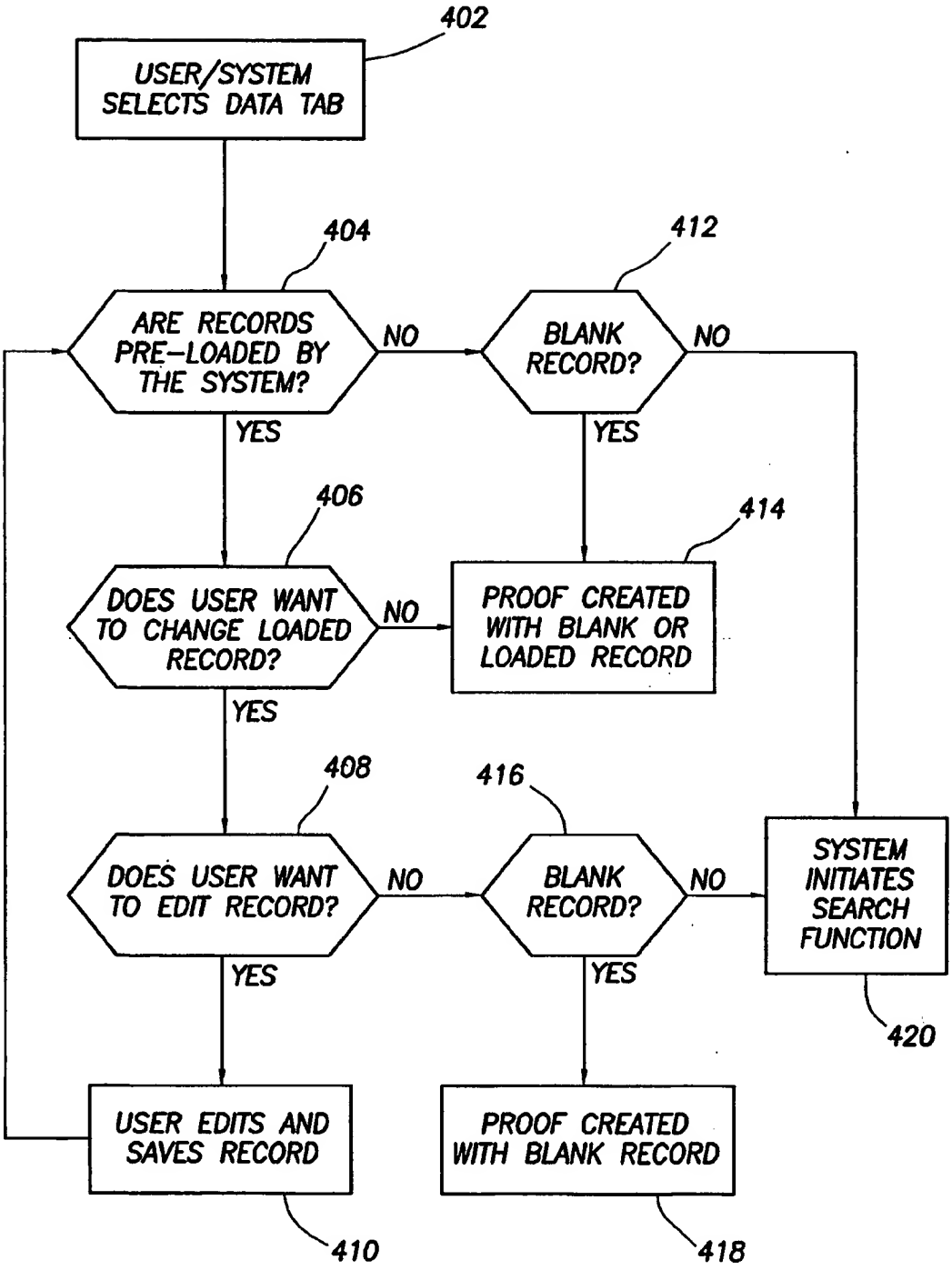

402
USER/SYSTEM SELECTS DATA TAB
404
ARE RECORDS PRE-LOADED BY THE SYSTEM?
NO
412
BLANK RECORD?
NO
YES
YES
406
DOES USER WANT TO CHANGE LOADED RECORD?
NO
414
PROOF CREATED WITH BLANK OR LOADED RECORD
YES
408
DOES USER WANT TO EDIT RECORD?
NO
416
BLANK RECORD?
NO
SYSTEM INITIATES SEARCH FUNCTION
YES
YES
420
USER EDITS AND SAVES RECORD
PROOF CREATED WITH BLANK RECORD
410
418

FIG.4a

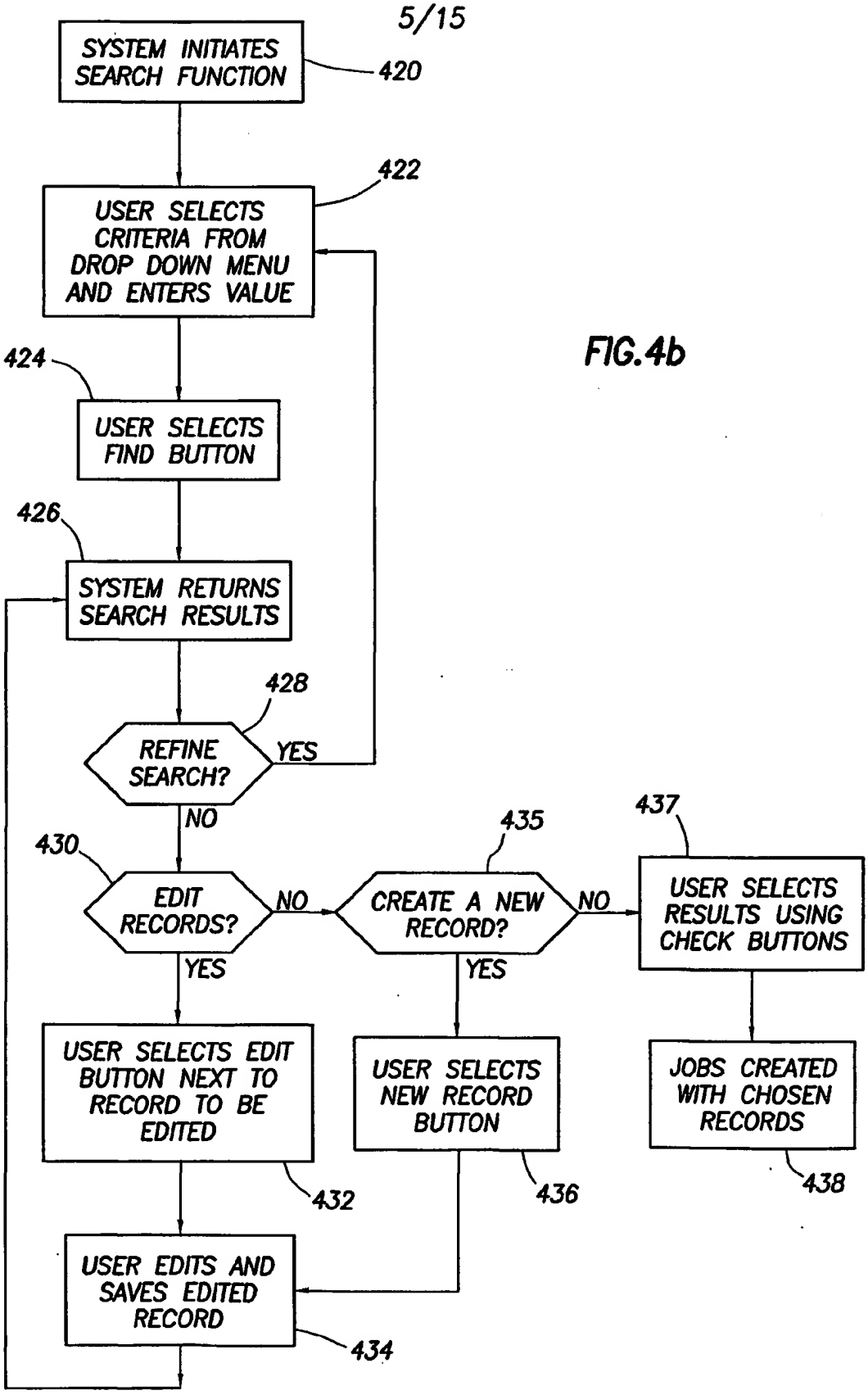

SYSTEM INITIATES SEARCH FUNCTION
420
422
USER SELECTS CRITERIA FROM DROP DOWN MENU AND ENTERS VALUE
424
USER SELECTS FIND BUTTON
426
SYSTEM RETURNS SEARCH RESULTS
428
REFINE SEARCH?
YES
NO
430
EDIT RECORDS?
NO
435
CREATE A NEW RECORD?
NO
437
USER SELECTS RESULTS USING CHECK BUTTONS
YES
YES
USER SELECTS EDIT BUTTON NEXT TO RECORD TO BE EDITED
USER SELECTS NEW RECORD BUTTON
JOBS CREATED WITH CHOSEN RECORDS
432
436
438
USER EDITS AND SAVES EDITED RECORD
434

FIG.4b

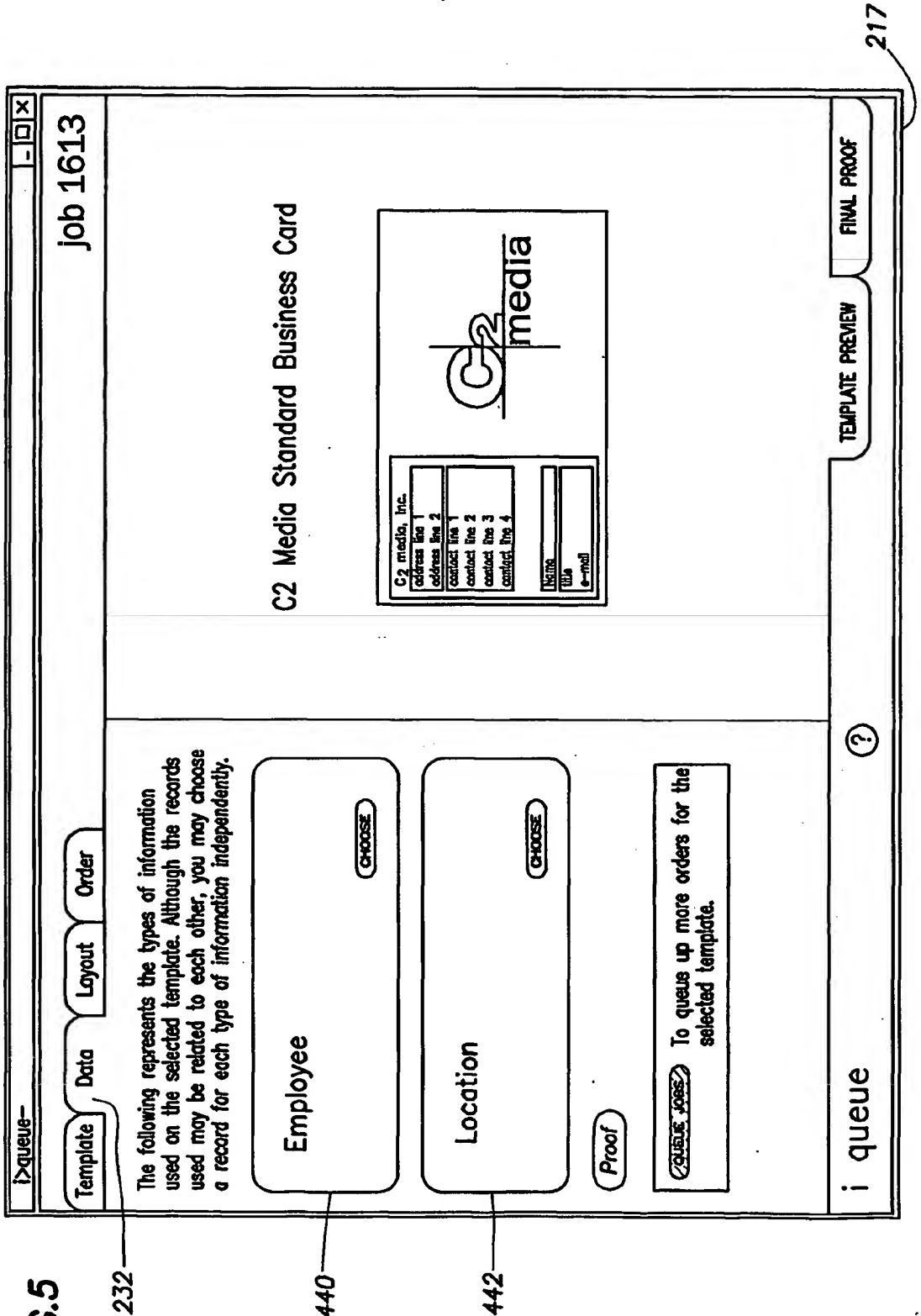

i>queue
Template
Data
Layout
Order
job 1613
The following represents the types of information used on the selected template. Although the records used may be related to each other, you may choose a record for each type of information independently.
Employee
CHOOSE
Location
CHOOSE
Proof
QUEUE JOBS
To queue up more orders for the selected template.
C2 Media Standard Business Card
C2 media, Inc.
address line 1
address line 2
contact line 1
contact line 2
contact line 3
contact line 4
Name
title
e-mail
c2 media
i queue
TEMPLATE PREVIEW
FINAL PROOF
217
232
440
442

FIG.5

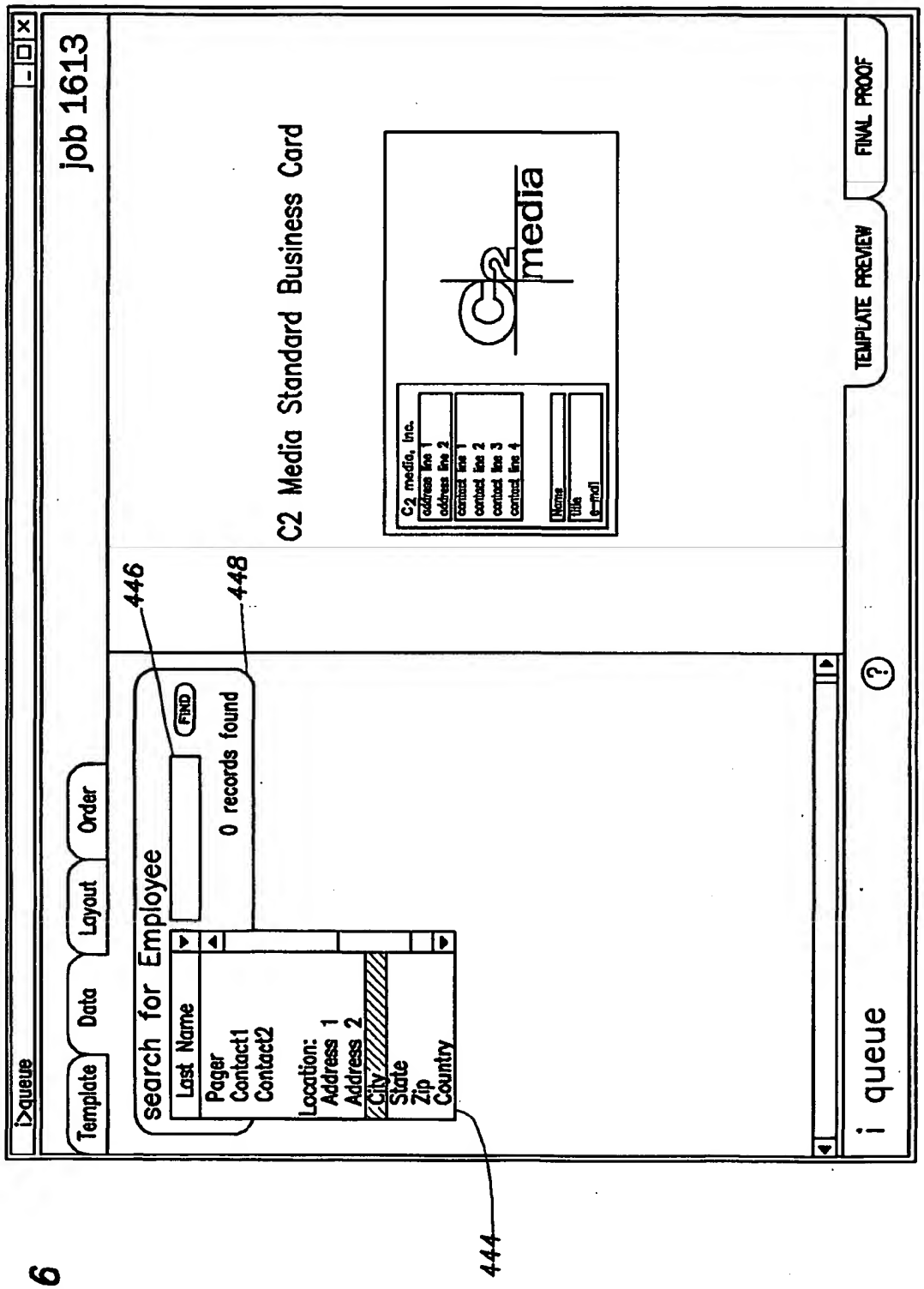

i>queue
Template
Data
Layout
Order
job 1613
C2 Media Standard Business Card
C2 media
C2 media, Inc.
address line 1
address line 2
contact line 1
contact line 2
contact line 3
contact line 4
Name
title
e-mail
search for Employee
Last Name
Pager
Contact1
Contact2
Location:
Address 1
Address 2
City
State
Zip
Country
FIND
0 records found
446
448
444
TEMPLATE PREVIEW
FINAL PROOF
i queue

FIG.6

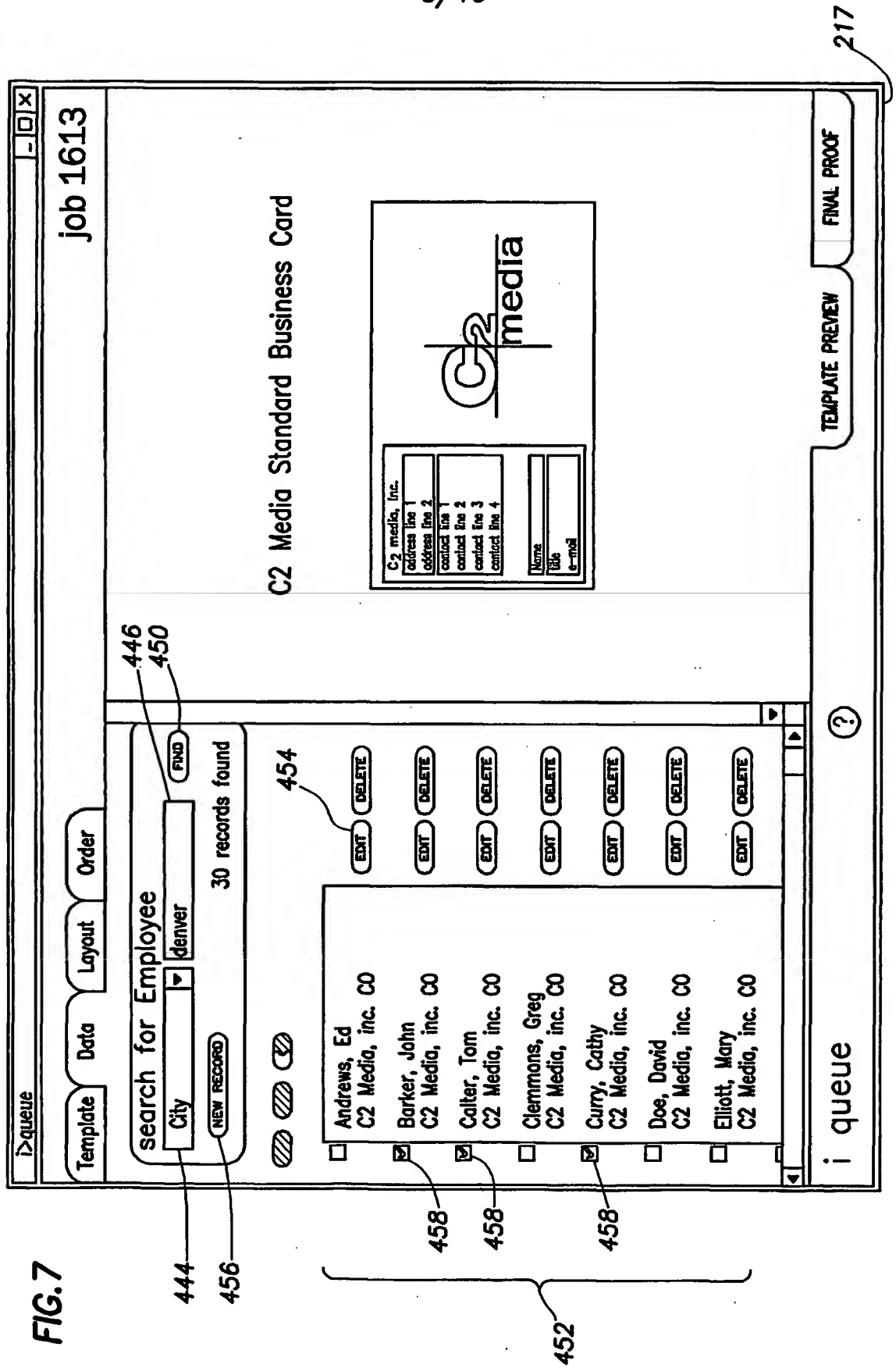

i>queue
Template
Data
Layout
Order
job 1613
C2 Media Standard Business Card
C2 media
C2 media, Inc.
address line 1
address line 2
contact line 1
contact line 2
contact line 3
contact line 4
Name
title
e-mail
search for Employee
City
denver
FIND
NEW RECORD
30 records found
EDIT
DELETE
Andrews, Ed
C2 Media, inc. CO
Barker, John
C2 Media, inc. CO
Calter, Tom
C2 Media, inc. CO
Clemmons, Greg
C2 Media, inc. CO
Curry, Cathy
C2 Media, inc. CO
Doe, David
C2 Media, inc. CO
Elliott, Mary
C2 Media, inc. CO
TEMPLATE PREVIEW
FINAL PROOF
i queue
217
446
450
454
444
456
458
458
458
452

FIG.7

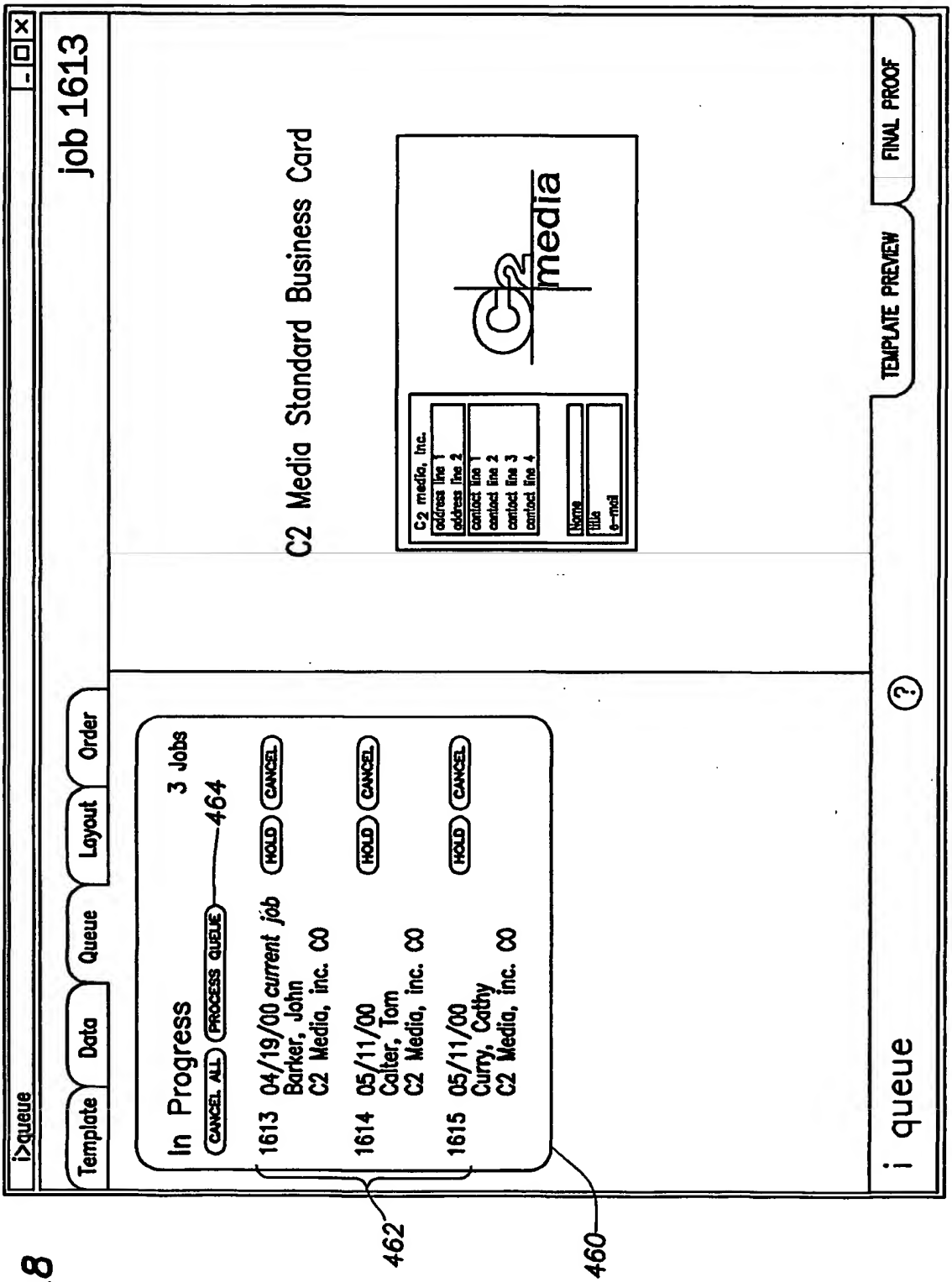
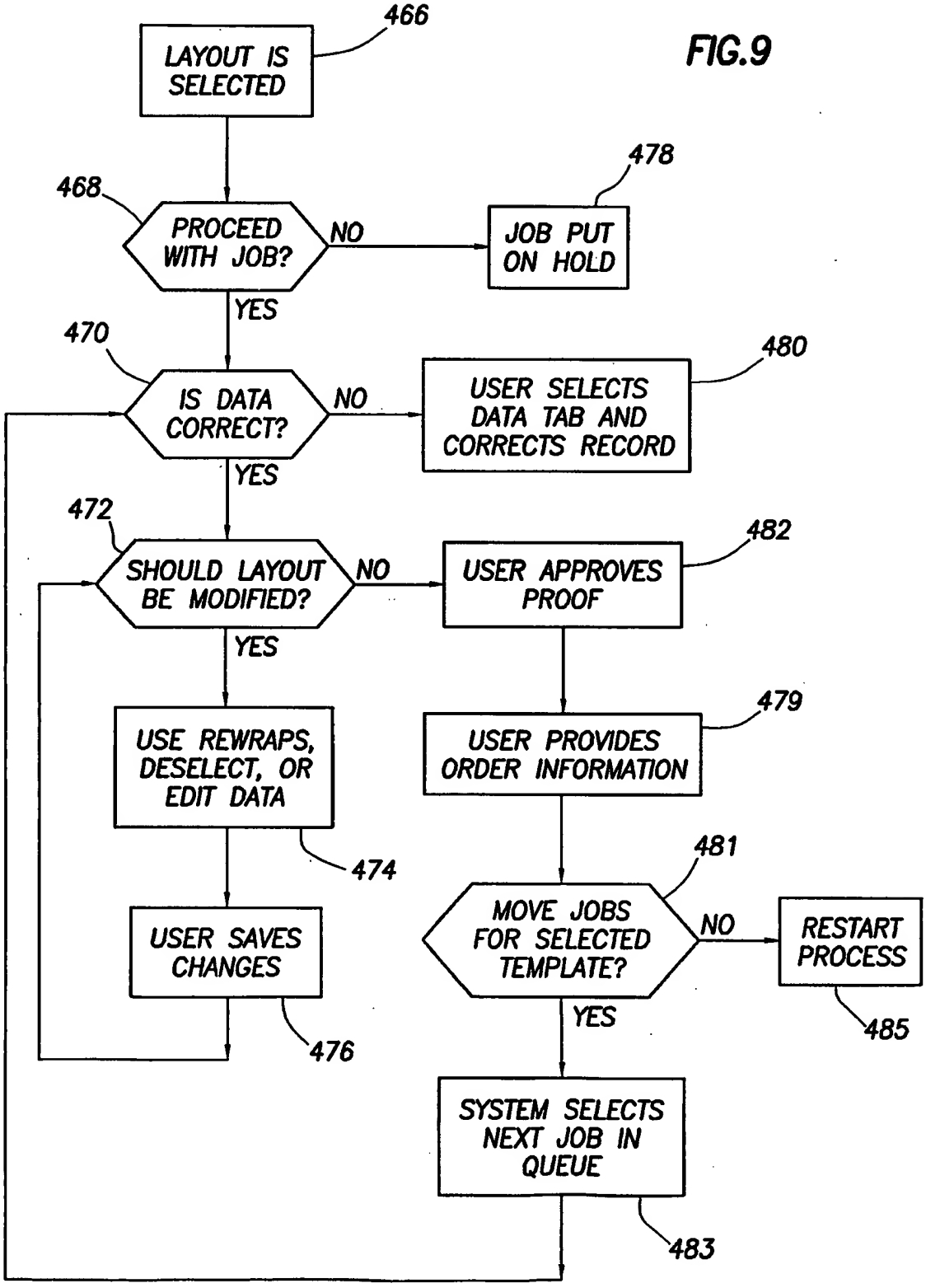

i>queue
Template
Data
Queue
Layout
Order
job 1613
In Progress
3 Jobs
CANCEL ALL
PROCESS QUEUE
464
1613 04/19/00 current job
Barker, John
C2 Media, inc. CO
HOLD
CANCEL
1614 05/11/00
Calter, Tom
C2 Media, inc. CO
HOLD
CANCEL
1615 05/11/00
Curry, Cathy
C2 Media, inc. CO
HOLD
CANCEL
462
460
i queue
?
TEMPLATE PREVIEW
FINAL PROOF
C2 Media Standard Business Card
C2 media, Inc.
address line 1
address line 2
contact line 1
contact line 2
contact line 3
contact line 4
Name
title
e-mail
C2 media

FIG.8

FIG.9


LAYOUT IS SELECTED
466
PROCEED WITH JOB?
468
NO
JOB PUT ON HOLD
478
YES
IS DATA CORRECT?
470
NO
USER SELECTS DATA TAB AND CORRECTS RECORD
480
YES
SHOULD LAYOUT BE MODIFIED?
472
NO
USER APPROVES PROOF
482
YES
USE REWRAPS, DESELECT, OR EDIT DATA
474
USER PROVIDES ORDER INFORMATION
479
USER SAVES CHANGES
476
MOVE JOBS FOR SELECTED TEMPLATE?
481
NO
RESTART PROCESS
485
YES
SYSTEM SELECTS NEXT JOB IN QUEUE
483

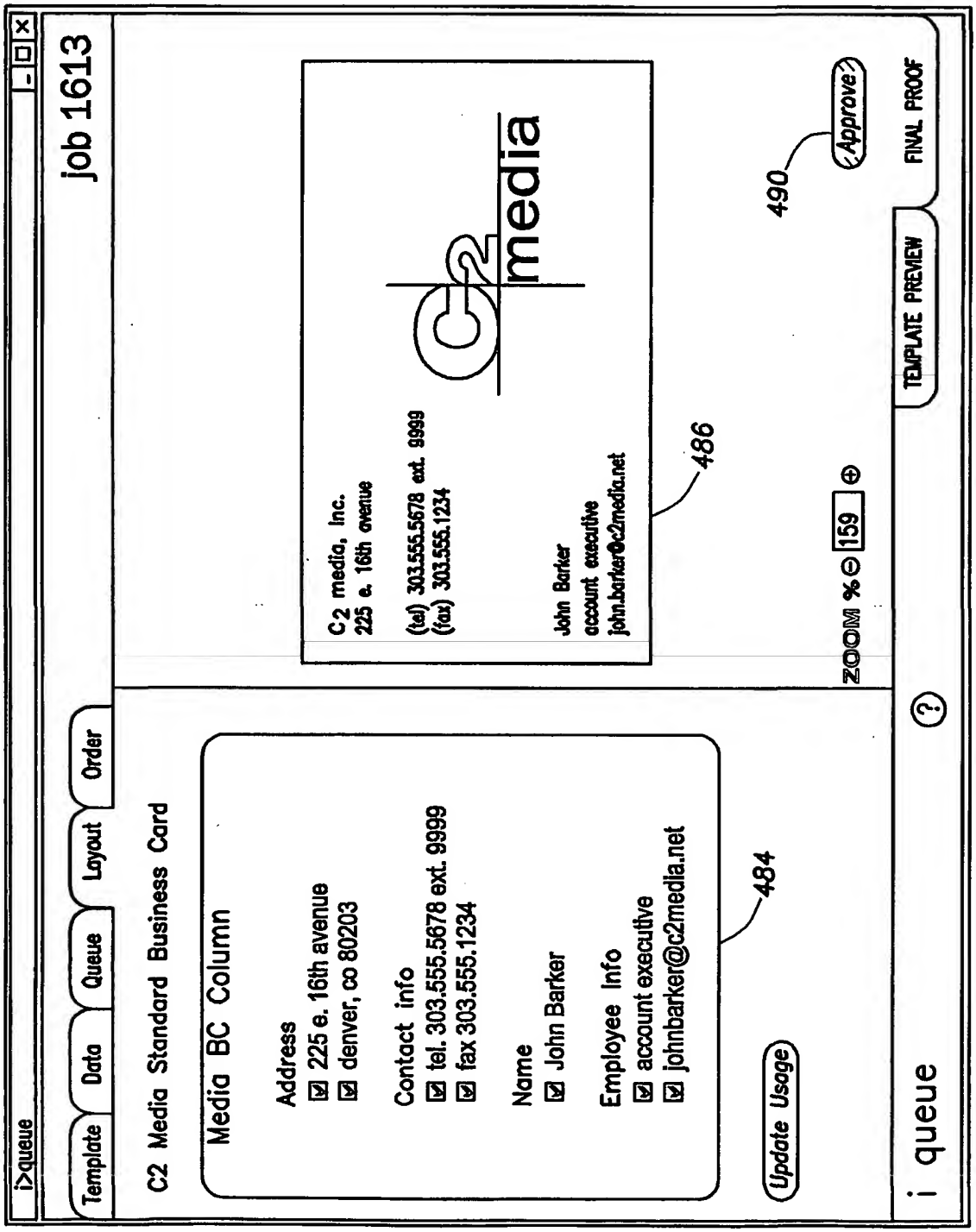

i>queue
job 1613
Template
Data
Queue
Layout
Order
C2 Media Standard Business Card
Media BC Column
Address
225 e. 16th avenue
denver, co 80203
Contact info
tel. 303.555.5678 ext. 9999
fax 303.555.1234
Name
John Barker
Employee Info
account executive
johnbarker@c2media.net
484
Update Usage
C2 media, Inc.
225 e. 16th avenue
(tel) 303.555.5678 ext. 9999
(fax) 303.555.1234
John Barker
account executive
john.barker@c2media.net
486
c2 media
ZOOM % 159
490
Approve?
TEMPLATE PREVIEW
FINAL PROOF
i queue

FIG. 10

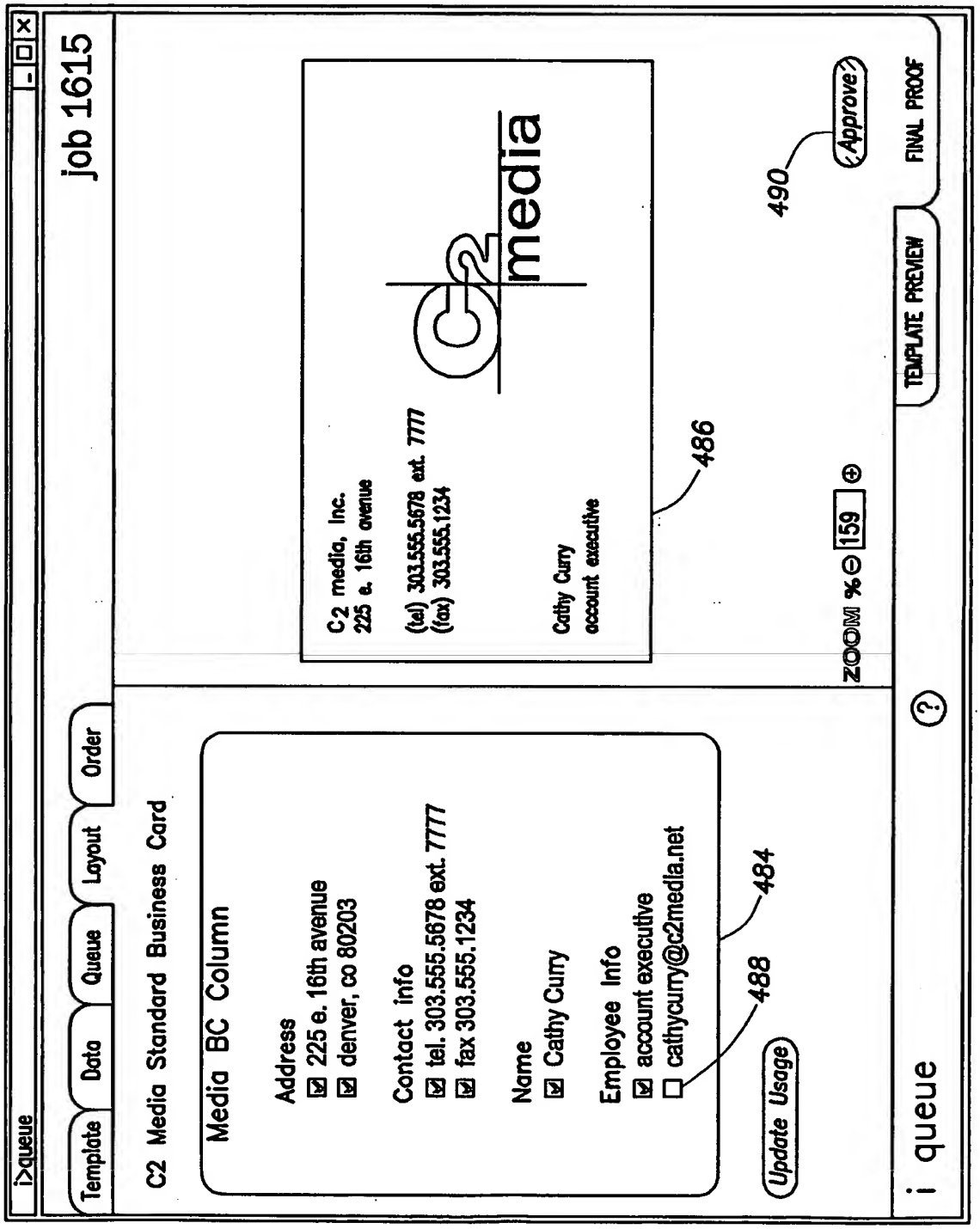

i>queue
Template
Data
Queue
Layout
Order
job 1615
C2 Media Standard Business Card
Media BC Column
Address
225 e. 16th avenue
denver, co 80203
Contact info
tel. 303.555.5678 ext. 7777
fax 303.555.1234
Name
Cathy Curry
Employee Info
account executive
cathycurry@c2media.net
484
488
Update Usage
C2 media, Inc.
225 e. 16th avenue
(tel) 303.555.5678 ext. 7777
(fax) 303.555.1234
Cathy Curry
account executive
486
c2 media
ZOOM % 159
490
Approve
TEMPLATE PREVIEW
FINAL PROOF
i queue

FIG. 11

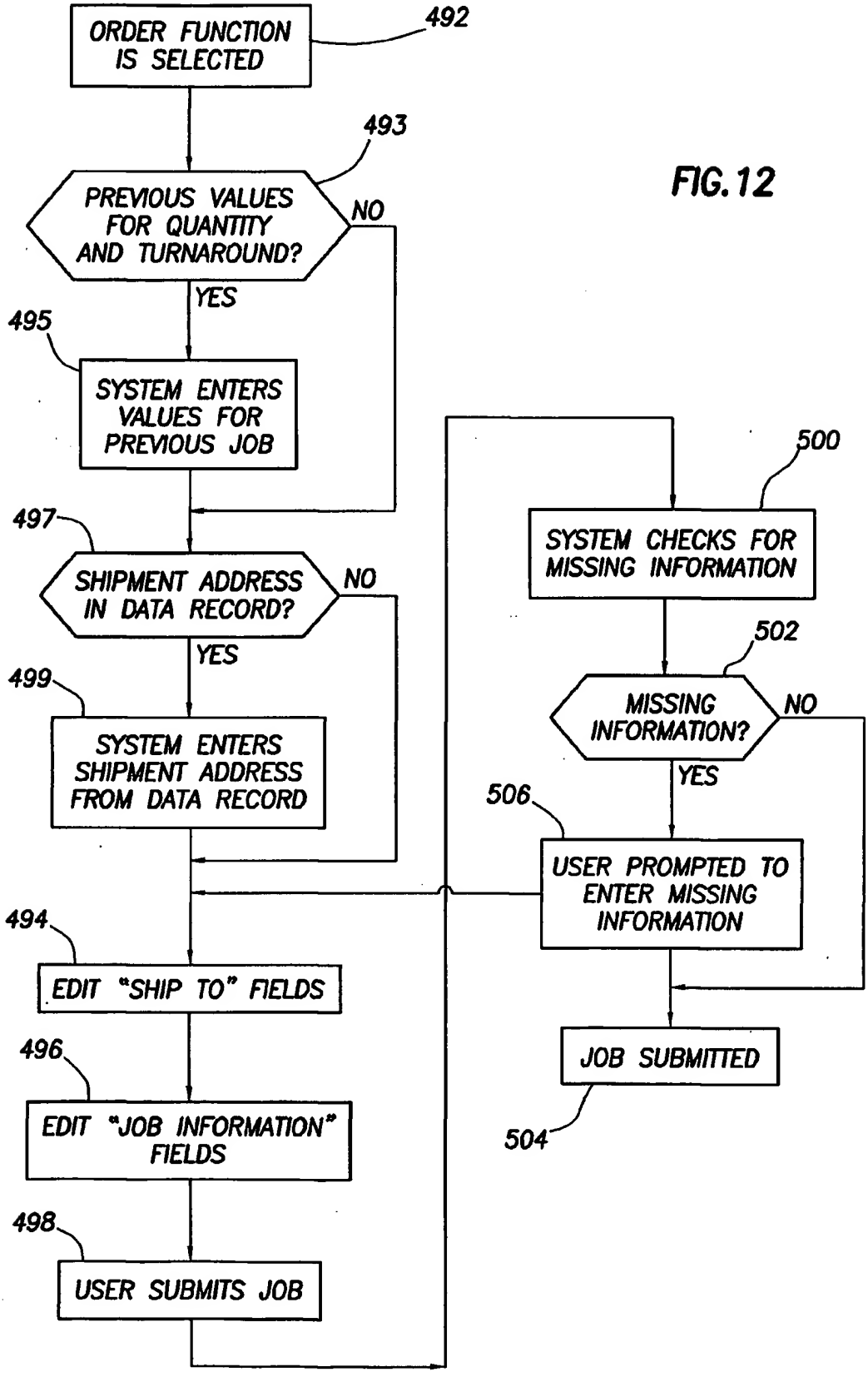

ORDER FUNCTION IS SELECTED
492
493
PREVIOUS VALUES FOR QUANTITY AND TURNAROUND?
NO
YES
495
SYSTEM ENTERS VALUES FOR PREVIOUS JOB
497
SHIPMENT ADDRESS IN DATA RECORD?
NO
YES
499
SYSTEM ENTERS SHIPMENT ADDRESS FROM DATA RECORD
494
EDIT "SHIP TO" FIELDS
496
EDIT "JOB INFORMATION" FIELDS
498
USER SUBMITS JOB
500
SYSTEM CHECKS FOR MISSING INFORMATION
502
MISSING INFORMATION?
NO
YES
506
USER PROMPTED TO ENTER MISSING INFORMATION
JOB SUBMITTED
504

FIG. 12

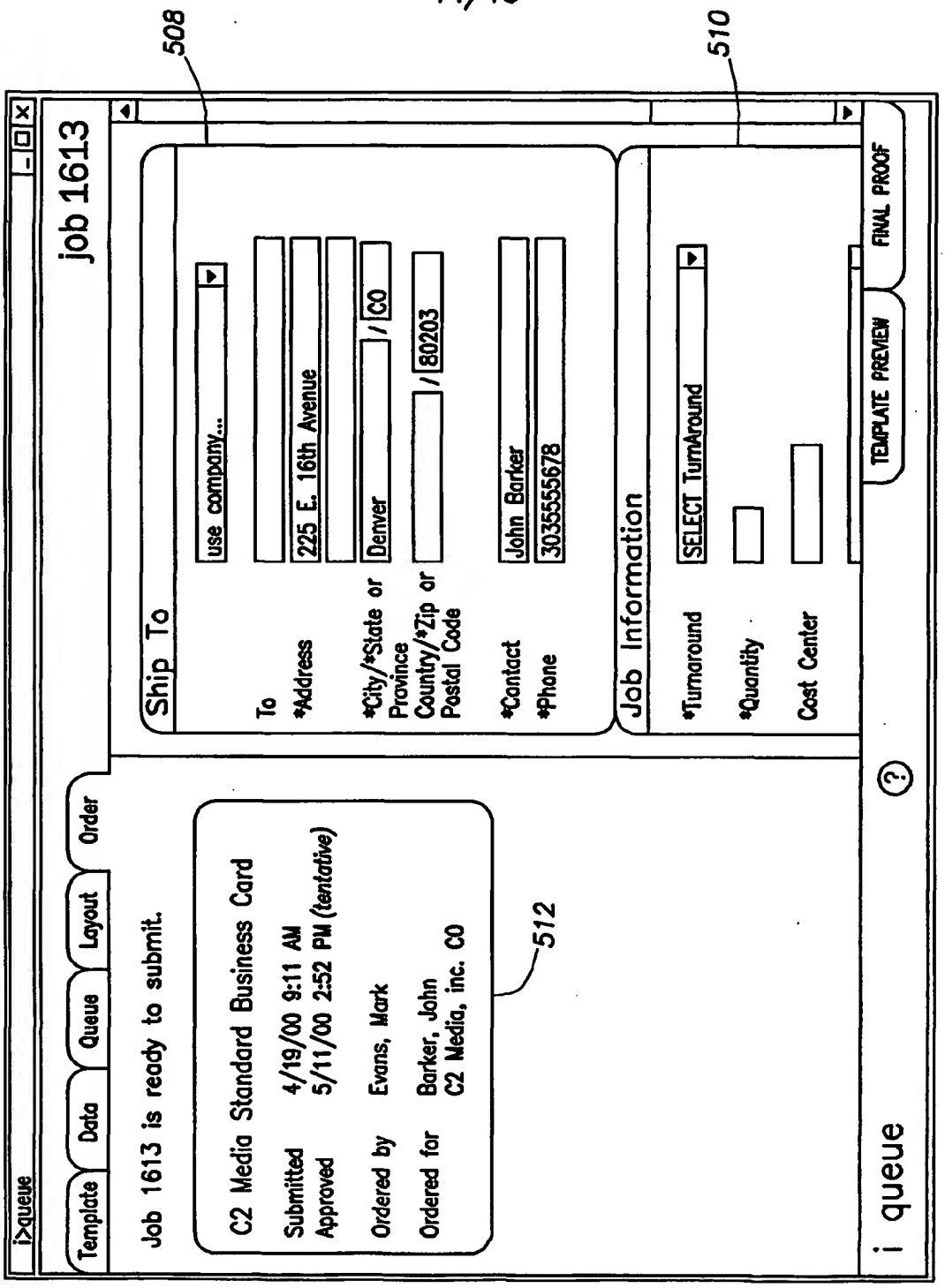

i>queue
job 1613
Template
Data
Queue
Layout
Order
Job 1613 is ready to submit.
C2 Media Standard Business Card
Submitted 4/19/00 9:11 AM
Approved 5/11/00 2:52 PM (tentative)
Ordered by Evans, Mark
Ordered for Barker, John
C2 Media, inc. CO
512
508
Ship To
use company...
To
*Address
225 E. 16th Avenue
*City/*State or Province
Denver
/ CO
*Country/*Zip or Postal Code
/ 80203
*Contact
John Barker
*Phone
3035555678
510
Job Information
*Turnaround
SELECT TurnAround
*Quantity
Cost Center
TEMPLATE PREVIEW
FINAL PROOF
i queue

FIG. 13

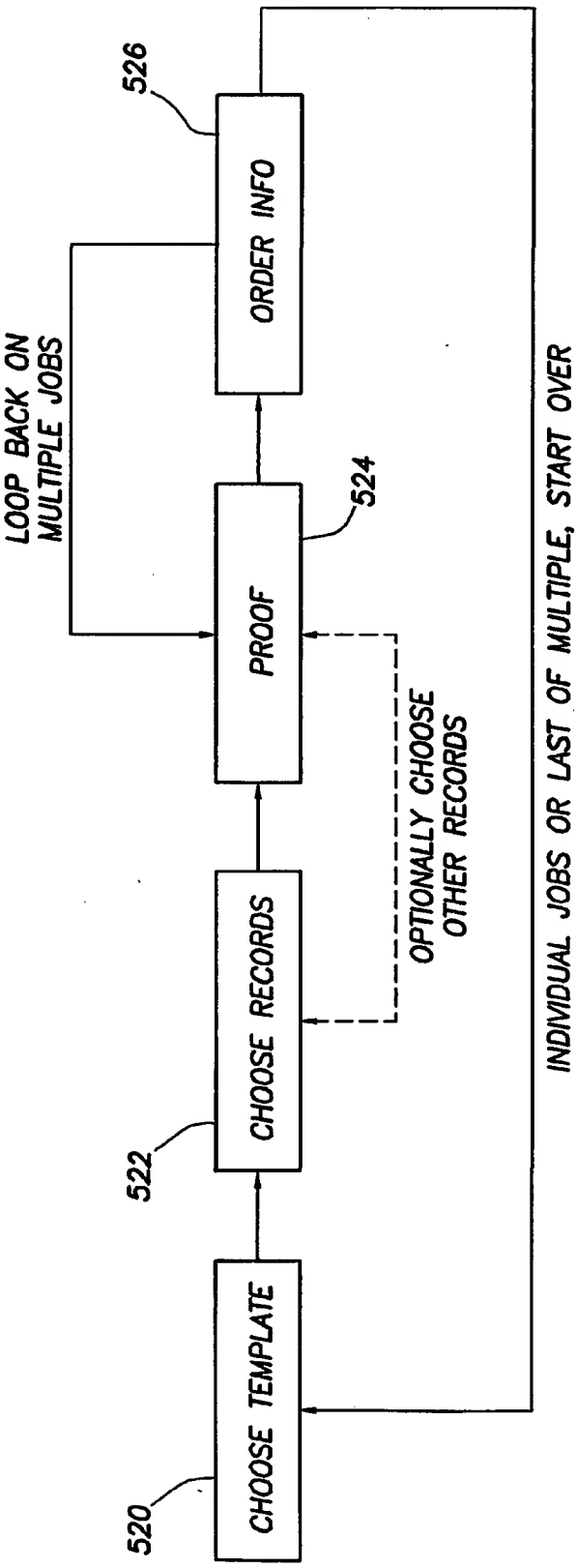

526
ORDER INFO
524
PROOF
522
CHOOSE RECORDS
520
CHOOSE TEMPLATE
LOOP BACK ON MULTIPLE JOBS
OPTIONALLY CHOOSE OTHER RECORDS
INDIVIDUAL JOBS OR LAST OF MULTIPLE, START OVER

FIG. 14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/17225

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G06F 15/00
US CL :358/1.12, 1.15
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 358/1.12, 1.15

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,839,829 A (FREEDMAN) 13 June 1989, see the entire document.	1-24
Y	US 5,991,739 A (CUPPS et al) 23 November 1999, see the entire document.	1-24

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 30 JULY 2001	Date of mailing of the international search report 18 OCT 2001
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer MARK WALLERSON Telephone No. (703) 305-8581

Form PCT/ISA/210 (second sheet) (July 1998)★